



Deutsche  
Gesellschaft für  
Pflanzenernährung



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## Bilateral Conference of the German Society of Plant Nutrition (DGP) 2021

Germany meets Denmark  
-Challenges and Perspectives for Plant Nutrition in 2030

Wednesday, 22<sup>th</sup> September 2021



14:00

Welcome address

- Karl H. Mühling, Dean, Faculty of Agricultural and Nutritional Sciences, Kiel University
- Torsten Müller, University of Hohenheim
- Edgar Peiter, Chair DGP
- Simone Fulda, President, Kiel University

Session 1: NUTRIENT AVAILABILITY & CYCLING IN SOILS  
Chair: Karl H. Mühling

14:15

**Plenary Lecture: Experience of the new rules of fertilization in Denmark**  
Jan Kofod Schjørring (Copenhagen, Denmark), [jks@plen.ku.dk](mailto:jks@plen.ku.dk)

15:00

**Remote sensing methods for monitoring crop nitrogen and water status.**  
Mathias Neumann Andersen (Aarhus, Denmark),  
[mathiasn.andersen@agro.au.dk](mailto:mathiasn.andersen@agro.au.dk)

15:30

**Root growth and resource acquisition of crops**  
Kristian Thorup-Kristensen (Taastrup, Denmark), [ktk@plen.ku.dk](mailto:ktk@plen.ku.dk)

16:00

Coffee Break and Posters Session

17:00

**Annual Meeting of the German Society of Plant Nutrition (Members only)**  
Edgar Peiter

**Thursday, 23<sup>th</sup> September 2021**

**Session 2: NUTRIENT ACQUISITION & HOMEOSTASIS**

Chair: Edgar Peiter

- 09:00      **Synthesis and iron acquisition properties of coumarin-type siderophores**  
Ricardo Giehl und Nicolaus von Wirén (Gatersleben)
- 09:30      **The role of ITPK1-dependent inositol pyrophosphates in controlling systemic phosphate signaling.**  
Ester Riemer (Bonn), Ricardo Giehl (Gatersleben) & Gabriel Schaaf (Bonn)
- 10:00      **The role of DNA methylation in nutrient recovery during senescence.**  
Emil Vatow, Ulrike Zentgraf & Uwe Ludewig (Hohenheim)
- 10:30      Coffee Break, Posters Session, and Meeting Photo

**Session 3: NUTRIENT FUNCTION IN PLANTS**

Chair: Sven Schubert

- 11:00      **Functional properties of P in plants and new ways to detect P deficiency in plants.**  
Soren Husted (Copenhagen, Denmark), [shu@plen.ku.dk](mailto:shu@plen.ku.dk)
- 11:30      **Boron efficiency in Brassica napus: New QTLs for old questions**  
Thomas Alcock (München), Christian Flügge (Göttingen), Eva Heinrich (Göttingen), Benjamin Pommerrenig (Kaiserslautern), Astrid Junker (IPK), Thomas Altmann (IPK), Antje Schierholt (Göttingen) & Gerd Patrick Bienert (München)
- 12:00      **Calcium – the nutrient that rules the plant.**  
Edgar Peiter (Halle)
- 13:00      Lunch

**Session 4: PLANT NUTRITION, YIELD STABILITY & FOOD QUALITY**

Chair: Christian Zörb

- 14:00      **Water-saving rice production: A heretic's point of view.**  
Mathias Becker (Bonn)
- 14:30      **Leaf water homeostasis and apoplastic pH: Derivation of control parameters for a putative negative feedback-loop**  
Hartmut Kaiser & Karl H. Mühling (Kiel)

15:00 **Nitrogen management for the quality of bread and wine**  
Christian Zörb, M. Dier, A. Rekowski, C. Lang, N. Merkt & M. Wimmer  
(Hohenheim)

15:30 Coffee break and Posters Session

Session 5: FERTILIZERS & FERTILIZATION  
Chair: Klaus Dittert

16:00 **Closing phosphorus cycles in maize-based cropping systems**  
Mehdi Nkebiwe, Tobias Hartmann, Yawen You, Daniel Wanke, Yuan Wang,  
Huaiyu Yang, Xinping Chen, Fusuo Zhang & Torsten Müller (Hohenheim,  
Beijing, Chongqing)

16:30 **GülleBest – Innovative liquid manure application techniques for use in  
growing crops to mitigate ammonia and greenhouse gas emissions and to  
improve nitrogen productivity**  
Ten Huf, M., C. Buchen, C. Essich, H. Flessa, R. Fuß, T. Jorissen, G. Recke, T.  
Reinsch, R. Ruser, F. Taube, R. Well, M. Zutz & H.-W. Olf (Osnabrück,  
Braunschweig, Kiel, Hohenheim)

17:00 **Approaches to better adapt nitrogen fertilization to the demand of spinach  
in open-field production.**  
Christian Frerichs & Diemo Daum (Osnabrück)

17:30 **Awarding of the price for the best doctoral thesis in Plant Nutrition in  
2021 of the DGP**

19:00 **Conference Dinner**

**Friday, 24<sup>th</sup> September 2021**

Session 6: TOXICITY & REMEDIATION  
Chair: Christoph M. Geilfus

09:00 **Phytostabilization of heavy metal polluted soils: a case study for sewage  
farm soil in Berlin.**  
Liu Rui, Holger Bessler, Christof Engels (Berlin)

09:30 **Plants under salt stress: Is energy a limiting factor?**  
Sven Schubert & Franzika Faust (Gießen)

10:00 **Abscisic acid priming induces long-term salinity resistance in *Vicia faba*:  
Changes in key transcripts, metabolites, and ionic relations**  
Amit Sagervanshi & Karl H. Mühling (Kiel)

10:30 Coffee Break and Posters Session

Session 7: PLANT NUTRITION &  
ENVIRONMENTAL POLLUTION

Chair: Torsten Müller

11:00 **Adaptation of agricultural production systems to climate change**  
Jorgen Eivind Olesen (Aarhus, Denmark), [jeo@agro.au.dk](mailto:jeo@agro.au.dk)

11:30 **Nitrate uptake and C exudation – do plant roots stimulate or inhibit  
denitrification?**  
Pauline Sophie Rummel, Reinhard Well, Birgit Pfeiffer, Klaus Dittert,  
Sebastian Floßmann & Johanna Pausch (Göttingen)

12:00 **Closing lecture**  
**Reduction of nitrogen losses by an optimized N management system –  
GreenWindows 4.0**  
Urs Schmidhalter, Paul Heinemann & Maximilian Lösch (München)

13:00 **Prices for the best posters; Closing remarks**